M.R.O. 1—77,006—8-6-37.

(1) Number of pages 14

(2) Date of repair 2-5-41

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 210

427-28

Press ~~Mis.~~

Dated 25-1- 1871.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
25th January 1871.

No. 427. Read the following letter from the Executive Engineer on special duty, Madura District, to the Chief Engineer for Irrigation, dated Madura, 12th December 1870, No. 283 :—

I HAVE the honour to submit the subjoined report of the progress made, in November 1870, with the preparation of the scheme for the diversion of the Perryaur.

Two tables of rainfall and discharge of Perryaur.

2. The sinking of trial pits at the different sites proposed for the head-works in the hills was commenced, and has been steadily proceeded with. Rock has been found in all the saddles at about 12 feet below the surface.

3. A path has been cleared along the road constructed last year to facilitate the transport of stores and supplies. Lieutenant Greer found this communication overgrown with jungle and almost impassable.

4. Judging from the results of this year's working up to date, the reduced rate (6 Annas per day) introduced towards the close of last season is ample remuneration for able-bodied men. The coolies tried to get the original rate of 8 Annas per diem, and gave some trouble at first, but Lieutenant Greer was firm and managed so well that, in a few days, he had more labourers than he could employ.

5. The designs for the works and the trial estimates for the main channel on the north of the Vigay are in active preparation.

6. Statements showing the rainfall at the Perryaur Camp and the discharge of the Perryaur from the 18th October to the 30th November 1870 inclusive are enclosed. The usual diagrams will be submitted at an early date.

7. Annexed is an abstract of the surveying and levelling done during the month under review:—

Branch channel set out in miles.	Lineal miles of country surveyed.	Levelling operations. Aggregate length of longitudinal and transverse sections in miles.	Number of permanent bench-marks fixed.	Number of trial pits sunk to the full depth.
36⅝	81⅛	75⅞	8	84

PERRYAUR PROJECT.

Table of Rainfall and Discharge of Perryaur during the latter part of October 1870.

Dates.	Rainfall at Perryaur Camp.	Hours.	Water level in feet.	Discharge. Cubic feet per second.	Discharge. 1,000 Cubic yards per day.
	INCHES.				
18th	0·30	6 A. M.	2·90	1,682	5,328
		6 P. M.	2·84	1,648	
19th	0·23	6 A. M.	2·65	1,541	4,888
		6 P. M.	2·60	1,514	
20th	0·33	6 A. M.	2·75	1,602	4,933
		6 P. M.	2·54	1,481	

Table of Rainfall and Discharge of Perryaur, etc.—(Concluded.)

Dates.	Rainfall at Perryaur Camp.	Hours.	Water level in feet.	Discharge.	
				Cubic feet per second.	1,000 Cubic yards per day.
	Inches.				
21st	0·35	6 A. M. 6 P. M.	2·26 2·50	1,312 1,461	4,437
22nd	0·50	6 A. M. 6 P. M.	2·59 2·84	1,509 1,648	5,051
23rd	0·30	6 A. M. 6 P. M.	2·98 2·84	1,727 1,648	5,400
24th	0·13	6 A. M. 6 P. M.	2·50 2·34	1,461 1,362	4,517
25th	0·05	6 A. M. 6 P. M.	2·20 1·85	1,268 1,043	3,698
26th	0 02	6 A. M. 6 P. M.	1·50 1·50	845 845	2,704
27th	0·02	6 A. M. 6 P. M.	1·30 1·24	752 726	2,365
28th	0·00	6 A. M. 6 P. M.	0·95 0 88	609 584	1,909
29th	0·00	6 A. M. 6 P. M.	0·75 0·75	536 536	1,715
30th	0·08	6 A. M. 6 P. M.	0·75 0·69	536 514	1,680
31st	0·30	6 A. M. 6 P. M.	0·65 0·60	500 483	1,573
Total...	2·61				50,198

Depth run off from Catchment Basin of 250 square miles in 14 days = 2·33 inches.

Mean Discharge ... { 3,585,571 Cubic yards per day.
149,399 ,, ,, per hour.
1,120 Cubic feet per second.

Madura,
12*th December* 1870.

(Signed) R. SMITH,
Executive Engineer on special duty.

PERRYAUR PROJECT.

Table of Rainfall and Discharge of Perryaur during November 1870.

Dates.	Rainfall at Perryaur Camp.	Hours.	Water level in feet.	Discharge.	
				Cubic feet per second.	1,000 Cubic yards per day.
	Inches.				
1st	0·25	6 A. M. 6 P. M.	0·66 0·75	504 536	1,664
2nd	0·18	6 A. M. 6 P. M.	0·50 0·50	451 451	1,443
3rd	0·05	6 A. M. 6 P. M.	0·42 0·42	426 426	1,363
4th	0·00	6 A. M. 6 P. M.	0·35 0·35	408 408	1,306
5th	0·65	6 A. M. 6 P. M.	0·35 0·25	408 389	1,275
6th	0·15	6 A. M. 6 P. M.	0·75 1·05	536 649	1,896
7th	0·15	6 A. M. 6 P. M.	0·66 0·58	504 477	1,570

Table of Rainfall and Discharge of Perryaur during November 1870.—(Continued.)

Dates.	Rainfall at Perryaur Camp.	Hours.	Water level in feet.	Discharge.	
				Cubic feet per second.	1,000 Cubic yards per day.
	Inches.				
8th	0·22	6 A. M.	0·50	451	1,443
		6 P. M.	0·50	451	
9th	0·07	6 A. M.	1·66	928	2,899
		6 P. M.	1·58	884	
10th	0·10	6 A. M.	1·58	884	2,706
		6 P. M.	1·42	807	
11th	0·10	6 A. M.	1·33	766	2,176
		6 P. M.	0·91	594	
12th	0·10	6 A. M.	3·40	1,978	5,402
		6 P. M.	2·40	1,398	
13th	0·13	6 A. M.	4·00	2,457	6,336
		6 P. M.	2·58	1,503	
14th	0·50	6 A. M.	2·75	1,602	4,385
		6 P. M.	2·00	1,139	
15th	0·45	6 A. M.	3·20	1,856	21,158
		8 A. M.	4·71	3.191	
		10 A. M.	5·63	4,103	
		12 NOON.	8·00	6,925	
		2 P. M.	11·33	11,995	
		4 P. M.	10·08	9,933	
		6 P. M.	9·00	8,282	
16th	0·04	6 A. M.	4·30	2,696	7,203
		12 NOON.	3·55	2,079	
		6 P. M.	3·40	1,978	
17th	0·02	6 A. M.	2·75	1,602	4,800
		6 P. M.	2·40	1,398	
18th	0·12	6 A. M.	2·50	1,461	4,477
		6 P. M.	2·30	1,337	
19th	0·14	6 A. M.	8·00	6,925	13,731
		8 A. M.	7·80	6,661	
		10 A. M.	6·72	5,322	
		12 NOON.	4·90	3,377	
		2 P. M.	4·50	2,916	
		4 P. M.	4·15	2,560	
		6 P. M.	3·80	2,280	
20th	0·30	6 A. M.	5·20	3,668	8,576
		8 A. M.	4·80	3,277	
		10 A. M.	4·40	2,877	
		12 NOON.	4·20	2,680	
		2 P. M.	3·90	2,368	
		4 P. M.	3·40	1,978	
		6 P. M.	3·30	1,913	
21st	0·01	6 A. M.	2·90	1,682	4,678
		6 P. M.	2·15	1,242	
22nd	0·02	6 A. M.	1·85	1,043	2,872
		6 P. M.	1·30	752	
23rd	0·01	6 A. M.	3·10	1,794	4,914
		6 P. M.	2·20	1,277	
24th	0·01	6 A. M.	1·85	1,043	3,021
		6 P. M.	1·50	845	
25th	0·01	6 A. M.	1·40	798	2,480
		6 P. M.	1·30	752	
26th	0·02	6 A. M.	1·05	649	2,077
		6 P. M.	1·05	649	
27th	0·02	6 A. M.	0·75	536	1,715
		6 P. M.	0·75	536	
28th	0·02	6 A. M.	0·60	483	1,546
		6 P. M.	0·60	483	

Table of Rainfall and Discharge of Perryaur during November 1870.—(Concluded.)

Dates.	Rainfall at Perryaur Camp.	Hours.	Water level in feet.	Discharge. Cubic feet per second.	Discharge. 1,000 Cubic yards per day.
	INCHES.				
29th	0·00	6 A. M.	0·50	451	1,443
		6 P. M.	0·50	451	
30th	0·00	6 A. M.	0·50	451	1,453
		6 P. M.	0·52	457	
Total...	3·84	Indus	....	....	122,008

Depth run off from Catchment Basin of 250 square miles = 5·67 inches.

Mean Discharge ... { 4,066,933 Cubic yards per day. / 169,456 ,, ,, per hour. / 1,271 ,, feet per second.

		Cubic yards.
Discharge of Perryaur in November 1869	... ...	496,396,000
Do. do. in November 1870	... ...	122,008,000
	Difference...	374,388,000

(Signed) R. SMITH,
Executive Engineer on special duty.

MADURA,
12th December 1870.

No. 428. ORDER THEREON, 25th January 1871, No. 210.

IRRIGATION, No. 23.

ORDERED to be recorded.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R.E.,
Secretary to Government.

Exd. E. C. Shunker.

Perryaur Project

Table of Rainfall and Discharge of Perryaur during November 1870

Dates	Rainfall at Perryaur Camp. Inches	Hours	Water Level in feet	Discharge: Cubic feet per Second	Discharge: 1000 Cubic yards per day
1	0·25	6 a.m	0·66	504	1,664
		6 p.m	0·75	536	
2	0·18	6 am	0·50	451	1,443
		6 pm	0·50	451	
3	0·05	6 am	0·42	426	1,363
		6 pm	0·42	426	
4	0·00	6 am	0·35	408	1,306
		6 pm	0·35	408	
5	0·65	6 am	0·35	408	1,275
		6 pm	0·25	389	
6	0·15	6 am	0·75	536	1,896
		6 pm	1·05	649	
7	0·15	6 am	0·66	504	1,570
		6 pm	0·58	477	
8	0·22	6 am	0·50	451	1,443
		6 pm	0·50	451	
9	0·07	6 am	1·66	928	2,899
		6 pm	1·58	884	
10	0·10	6 am	1·58	884	2,706
		6 pm	1·42	807	
11	0·10	6 am	1·33	766	2,176
		6 pm	0·91	594	
12	0·10	6 am	3·40	1,978	5,402
		6 pm	2·40	1,398	
13	0·13	6 am	4·00	2457	6,336
		6 pm	2·58	1,503	
14	0·50	6 am	2·75	1,602	4,385
		6 pm	2·00	1,139	
15	0·45	6 am	3·20	1,856	21,158
		8 am	4·71	3191	
		10 am	5·63	4103	
		12 noon	8·00	6,925	
		2 pm	11·33	11,995	
		4 pm	10·08	9,933	
		6 pm	9·00	8,282	
16	0·04	6 am	4·30	2696	7,203
		12 noon	3·55	2,079	
		6 pm	3·40	1,978	
17	0·02	6 am	2·75	1,602	4,800
		6 pm	2·40	1,398	
18	0·12	6 am	2·50	1,461	4,477
		6 pm	2·30	1,337	
Total	3·28				73,502

Dates	Rainfall at Perryaur Camp Inches	Hours	Water Level in feet	Discharge: Cubic feet per Second	Discharge: 1000 Cubic yards per day
	3·28				73,502
19	0·14	6 am	8·00	6,925	13,731
		8 am	7·80	6661	
		10 am	6·72	5,322	
		12 noon	4·90	3,377	
		2 pm	4·50	2,916	
		4 pm	4·15	2,560	
		6 pm	3·80	2280	
20	0·30	6 am	5·20	3,668	8,576
		8 am	4·80	3,277	
		10 am	4·40	2,877	
		12 noon	4·20	2680	
		2 pm	3·90	2,368	
		4 pm	3·40	1,978	
		6 pm	3·30	1,913	
21	0·01	6 am	2·90	1,682	4,678
		6 pm	2·15	1,242	
22	0·02	6 am	1·85	1,043	2,872
		6 pm	1·30	752	
23	0·01	6 am	3·10	1,794	4,914
		6 pm	2·20	1,277	
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		6 pm	1·30	752	
26	0·02	6 am	1·05	649	2,077
		6 pm	1·05	649	
27	0·02	6 am	0·75	536	1,715
		6 pm	0·75	536	
28	0·02	6 am	0·60	483	1,546
		6 pm	0·60	483	
29	0·00	6 am	0·50	451	1,443
		6 pm	0·50	451	
30	0·00	6 am	0·50	451	1,453
		6 pm	0·52	457	
Total	3·84	Inches		Total	122,008

Depth run off from Catchment Basin of 250 Square miles = 5·67 inches.

Mean Discharge { 4,066,933 Cubic yards per day; 169,456 Cubic yards per hour; 1,271 Cubic feet per second.

	Cubic yards
Discharge of Perryaur in November 1869	496,396,000
Discharge of — Do. — in November 1870	122,008,000
Difference	374,388,000

Spl. Ex: Engr office.
Madura 12th Decr.
1870.

Compd [illegible]

J Smith
Executive Engineer [illegible] duty

Enclosure No. 2 in a Letter from the Executive Engineer, On special duty Madura District, dated 12th December 1870

No. 283

To,

The Chief Engineer for Irrigation Madras

PW 51/71.

Table of Rainfall and discharge of Perryaur during November 1870.

Perryaur Project

Table of rainfall and discharge of Perryaur during the latter part of October 1870.

Dates	Rainfall at Perryaur Camp Inches	Hours	Water level in feet	Discharge: Cubic feet per second	Discharge: 1000 Cubic yards per day
18th	0.30	6 a.m. 6 p.m.	2.90 2.84	1,682 1,648	5,328
19th	0.23	6 a.m. 6 p.m.	2.65 2.60	1,541 1,514	4,888
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24	0.13	6 a.m. 6 p.m.	2.50 2.34	1,461 1,362	4,517
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30	0.08	6 a.m. 6 p.m.	0.75 0.69	536 514	1,680
31	0.30	6 a.m. 6 p.m.	0.65 0.60	500 483	1,573
Total	2.61				50,198

Depth run off from Catchment Basin of 250 Square miles in 14 days ______ = 2.33 inches

Mean discharge { 3,585,571 Cubic yards per day
149,399 Cubic yards per hour
1,120 Cubic feet per second.

Special Ex: Engr's office
Madura 12th December 1870. } Comp'd [illegible] [illegible]

[illegible signature]

Executive Engineer On [illegible]

Enclosure No. 1 in a Letter from the Executive Engineer, On special duty Madura Dist., dated 12 December 1870.

No. 283

To

The Chief Engineer for Irrigation, Madras

P.W. 51/71.
Pro-25th Jany/71 L L 427.

Table of rainfall and discharge of Perryaur during the latter part of October 1870. —

No. 283 Special Executive Engineer's Office
Madura 12th December 1870

From,

R. Smith Esqre.
Executive Engineer, On Special duty
Madura District

To,

Major J. Mullins R.E.
Chief Engineer for Irrigation.
Madras

Sir,

Enclosures 2.
2. Tables of Rainfall and discharge of Perryaur.

I have the honor to submit the subjoined report of the progress made, in November 1870, with the preparation of the Scheme for the diversion of the Perryaur. —

2. The sinking of trial pits, at the different sites proposed for the Head Works in the Hills, was Commenced and has been steadily proceeded with — Rock has been found, in all the saddles, at about 12 feet or so below the surface. —

3.

3. A path has been cleared along the road, constructed last year, to facilitate the transport of stores and supplies. Lieutenant Greer found this communication overgrown with Jungle and almost impassable.

4. Judging from the results of this year's working, up to date, the reduced rate (6 annas per day) introduced, towards the close of last season, is ample remuneration for able-bodied men. The Coolies tried to get the original rate, of 8 annas per diem, and gave some trouble at first, but Lieutenant Greer was firm and managed so well that, in a few days, he had more labourers than he could employ.

5. The designs for the works, and the trial estimates for the main Channel, on the North of the Vigay, are in active preparation.

6. Statements showing the rain-fall at

No 2

at the Perryaur Camp, and the discharge of the Perryaur, from the 18th October to the 30th November 1870 inclusive, are enclosed_ The usual diagrams will be submitted at an early date._

7. Annexed is an abstract of the Surveying and Levelling done during the month under review._

Branch Channel set out in Miles	Lineal miles of Country Surveyed	Levelling operations Aggregate length of Longitudinal and Transverse Sections in miles	Number of permanent Bench Marks fixed	Number of Trial pits sunk to the full depth
$36\frac{3}{8}$	$81\frac{1}{8}$	$75\frac{7}{8}$	8.	84.

I have the honor to be
Sir,
Your Most Obedient Servant
J. Smith
Executive Engineer
On Special duty
Madura District

PW 1871 Dept
No. 283
~~Hist. No.~~ No. 51

From,

The Executive Engr.
On Special duty
Madura Distt.

To,

The Chief Engineer
for Irrigation
Madras

Dated 12th.
Despd. 14th.
Received. 16th. } December 1870
Recd: 6th. Jany. 2/71
Enclosures.

Submits the report of the progress made in November last with the preparation of the Scheme for the diversion of the Periyaur.

No. 210 / 25 Jany /71
With an estt.

No. 210

Ordered to be recorded

Wy. 28/12/70

Forwarded to Govt. 25 Jany/71

No 57

Govt. of {1871} Madras.

PUBLIC WORKS.

To

Dated.

Recd. End.

G. O. 25 Jany 1871, No. 210.

Nos. 427-428

Periyar Project. The Progress Report, submitted by the Exec. Engr., on Special Duty Madura, of the Periyar Project for Novr 70, recorded.